

DRILL HOLES

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PROJECT DESCRIPTION

I. GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF AN ACCESSIBLE PEDESTRIAN PUSHBUTTON SYSTEM (APS) /COUNTDOWN PEDESTRIAN SIGNAL (CPS) EQUIPMENT AND ADA COMPLIANT RAMPS AT THE EXISTING INTERSECTION OF ELM RD AND TERMINAL RD IN ANNE ARUNDEL COUNTY, MARYLAND.

TERMINAL RD IS ASSUMED TO RUN IN AN NORTH-SOUTH DIRECTION.

II. INTERSECTION OPERATION

- THE INTERSECTION SHALL CONTINUE TO OPERATE IN A NEMA FOUR-PHASE, FULL-ACTUATED MODE, WITH THE TERMINAL RD APPROACHES RUNNING CONCURRENTLY. THE ELM RD APPROACH WILL CONTINUE TO OPERATE AS EXISTING. ALL PEDESTRIAN PHASE OPERATION SHALL REMAIN AS EXISTING, WITH AUDIBLE ACTUATED PEDESTRIAN SIGNALS INSTALLED ON THE WEST, SOUTH LEGS OF THE INTERSECTION.

III. SPECIAL NOTES

- THE PROPOSED APS FUNCTIONS AS FOLLOW:  
TO CROSS TERMINAL RD  
a. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON ON THE CORNERS FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL BE "WAIT TO CROSS TERMINAL AT ELM, BUTTONS IN MEDIAN, WAIT"  
b. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON IN THE MEDIAN FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL BE "WAIT TO CROSS TERMINAL AT ELM, WAIT"  
c. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.
- THE CONTRACTOR SHALL PURCHASE AND DELIVER THE 2-WIRE CENTRAL CONTROL UNIT FOR THE CONTROLLER TO SHA SIGNAL SHOP, AT 7491 CONNELLY ROAD, HANOVER, MD 21076. MR. EDWARD RODENHIZER AT 410-787-7652 SHALL BE CONTACTED AT LEAST 3 DAYS PRIOR TO THE DELIVERY.

THE CONTACT PERSONS FOR DISTRICT #5 (ANNE ARUNDEL COUNTY, CALVERT COUNTY, ST MARY'S COUNTY) ARE AS FOLLOWS:

MR. LEE STARKLOFF  
DISTRICT ENGINEER  
410-841-1001

MR. JAMES FOLDEN  
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION  
410-841-1031

MS. KIMBERLY TRAN  
ASSISTANT DISTRICT ENGINEER - TRAFFIC  
410-841-1019

MR. JOE GECKLE  
ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
410-841-1000

MR. MIKE HUBER  
DISTRICT UTILITY ENGINEER  
410-841-1039

MR. DON MACLEAN  
MDTA ACTING TRAFFIC MANAGER - TRAFFIC SECTION  
PHONE: (410) 537-7848

MR. ED RODENHIZER  
CHIEF - SIGNAL SHOP  
PHONE: (410) 787-7670

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE SHA.

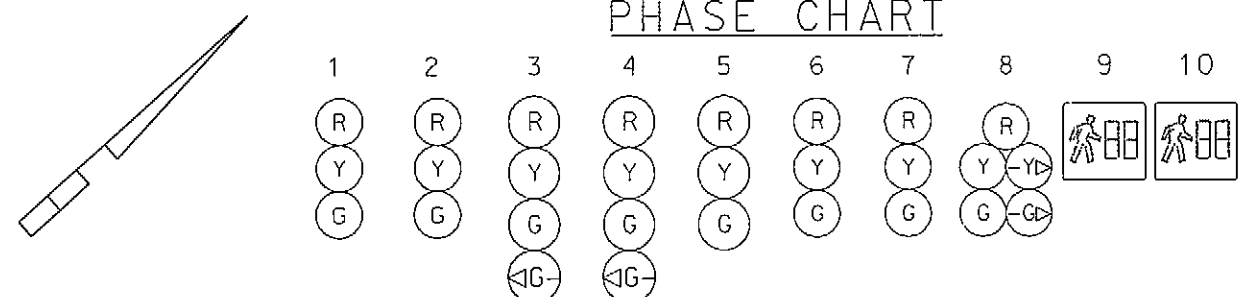
ITEM CODE	QTY	UNITS	DESCRIPTION
9571	38	SF	SHEET ALUMINIUM TO CONSIST OF: - 4 EACH R10-3(1) SIGN (9"x15") TO READ "PUSHBUTTON TO CROSS TERMINAL ROAD" 4 EACH W11-15 SIGN (30"x30") 2 EACH W16-7P(L) SIGN (21"x15") 2 EACH W16-7P(R) SIGN (21"x15")

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

ITEM CODE	QTY	UNITS	DESCRIPTION
6002	420	SF	5 IN. CONC. SIDEWALK
6003	84	SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
8002	1	EA	2 WIRE CENTRAL CONTROL UNIT
8008	4	EA	AUDIBLE TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
8009	4	EA	BREAKAWAY PEDESTAL POLE
8014	4	EA	INSTALL BREAKAWAY PEDESTAL POLE
8018	2	EA	LED 16 INCH COUNTDOWN PEDESTRIAN SIGNAL HEAD
8043	50	LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED
8044	67	LF	WOOD SIGN SUPPORTS UP TO 4" X 6"
8045	38	SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
8056	4	EA	CUT, CLEAN, GALVINIZE AND CAP TRAFFIC SIGNAL STRUCTURE
8047	70	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8058	975	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
8060	500	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)

- C. ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

PHASE CHART



PHASE 1 & 6	R	R	G	G	G	G	R	R	DW	DW
1 & 6 CHANGE	R	R	Y	Y	Y	Y	R	R	DW	DW
PHASE 2 & 6	G	G	R	R	R	R	R	R	DW	DW
2 & 6 CHANGE	Y	Y	R	R	R	R	R	R	DW	DW
PHASE 4	R	R	R	R	R	R	G	G	DW	DW
4 CHANGE	R	R	R	R	R	R	Y	Y	DW	DW
PHASE 4 ALT	R	R	R	R	R	R	G	G	WK	WK
PED CLEAR / COUNTDOWN	R	R	R	R	R	R	Y	Y	FL/DW	FL/DW
4 ALT CHANGE	R	R	R	R	R	R	R	R	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	DARK	DARK

WIRING KEY

- A) 5-CONDUCTOR ELECTRICAL CABLE,  
NO. 14 AWG/THHN
- C) 2-CONDUCTOR ELECTRICAL CABLE,  
NO. 14 AWG/THHN
- GW) STRANDED BARE COPPER  
GROUND WIRE (NO. 6 AWG)
- + GROUND ROD

TOD NO: XY139-03  
SHA NO: AA189B53  
MD 162, MD 170, MD 176 @ Various  
Locations



STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION

TERMINAL RETURN ROAD  
AND ELM ROAD

LINTHICUM HEIGHTS, MARYLAND

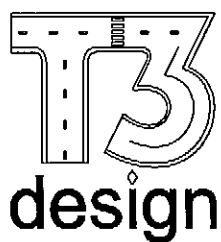
GENERAL INFORMATION SHEET

SCALE NONE DATE 02/19/2013 CONTRACT NO. XY1395185

DESIGNED BY SJW COUNTY ANNE ARUNDEL  
DRAWN BY JMS LOGMILE 02M17000.1  
CHECKED BY AJM TIMS NO. L653  
F.A.P. NO. TOD NO.

TS NO. TS-4045B

SHEET NO. 27 OF 33



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